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ABSTRACT

This study investigated the flexibility of 16 supervisors in implementing a developmental approach to supervisor-supervisee interaction during the postobservation conference. Specific objectives included determining: (1) if supervisors' diagnoses of supervisees' conceptual levels (CL) agreed with the Paragraph Completion Method (PCM) measurement of teachers' CL; (2) if supervisors could effectively implement an informational directive approach with one teacher, a collaborative approach with a second teacher, and an actively nondirective approach with a third teacher; (3) the extent to which supervisors' approaches matched PCM-based prescriptions for supervisory approach; (4) supervisor valuation of informational directive supervision, and developmental supervision in general; and (5) supervisee valuation of the three supervisory approaches. Supervisors revealed positive valuations of all three supervisory approaches and developmental supervision in general. The supervisors valued approaches matched to supervisees' PCM-measured CL somewhat more than unmatched approaches. Supervisees' valuations agreed with those of the supervisors. (Author/JD)

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Developmental Supervision, Supervisor Flexibility, and the Postobservation Conference

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Abstract

The purpose of the study was to investigate supervisor flexibility in implementing a developmental approach to supervisor-supervisee interaction during the postobservation conference.[1] Specific objectives included determining (a) if supervisors' diagnoses of supervisees' conceptual levels (CL) agreed with Paragraph Completion Method (PCM) measurement of teachers' CL, (b) if supervisors could effectively implement an informational directive approach with one teacher, a collaborative approach with a second teacher, and an actively nondirective approach with a third teacher, (c) the extent to which supervisors' approaches matched PCM-based prescriptions for supervisory approach, (d) supervisor valuation of informational directive supervision, collaborative supervision, actively nondirective supervision, and developmental supervision in general, and (e) supervisee valuation of the three supervisory approaches.

Sixteen supervisors trained in developmental supervision classified behaviors of individual supervisees within one of three broad conceptual categories. Supervisors classified supervisees at generally low, moderate, or high CL. There were 47 supervisor diagnoses of supervisee CL, with 19 agreements of supervisor diagnosis with PCM-measured supervisee CL. Thus only 40.4% of supervisor diagnoses agreed with PCM measured supervisee CL. Over 85% of supervisor written descriptions of the supervisees' behaviors, however, agreed with the CL literature. Ninety-three percent of the participating supervisors were

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[1]This paper reports selected aspects of the study. For a complete discussion, see Gordon, 1989.

able to effectively display an informational directive approach, 100% of the supervisors effectively displayed a collaborative approach, and 70% of the supervisors effectively displayed an actively nondirective approach. Forty-seven percent of all supervisory approaches matched PCM-based prescriptions for supervisory approach.

Open-ended written and oral perceptions expressed by supervisors revealed positive valuations of all three supervisory approaches and developmental supervision in general. The supervisors valued approaches matched to supervisees' PCM-measured CL somewhat more than unmatched approaches. A wide variety of indicators derived from participating supervisees' written and oral perceptions showed positive supervisee valuations of all three types of effective developmental postobservation conferences. Supervisees valued approaches that were matched to their PCM-measured CL somewhat more than unmatched approaches.

Theoretical-Research Background

Conceptual Level

Hunt and others have defined conceptual level (CL) "in terms of (1) increasing conceptual complexity as indicated by discrimination, differentiation, and integration, and (2) increasing interpersonal maturity as indicated by self definition and self-other relations" (Hunt, Butler, Noy, & Rosser, 1978). These conceptual theorists placed individuals on a continuum from most concrete (lowest CL) to most abstract (high CL). Grover reviewed conceptual theorists' descriptions of concrete and abstract personality characteristics:

> Placed in opposition to abstract conceptual functioning, concrete functioning was characterized by less self-declination (Carr, 1963), a greater tendency toward extremes . . . and less flexibility in the solution of complex problems. . . . The

> conceptually simple person had fewer ways of responding to a situation, showed intolerance for conflict, was less dependent on internally generated rules than a conceptually more complex person. Development was toward abstractness where the individual has an increased availability of alternative concepts for coping with the same stimuli (Harvey, Hunt, & Schroder, 1961). As conceptual level increased, the person became more capable of generating his own concepts, better able to consider alternatives and more self responsible. He had more ways of reacting to a situation, was more tolerant to ambiguity and stress and was more independent, explorative and creative (Noy & Hunt, 1972).
>
> When compared to a low conceptual person, the high conceptual person asked for more different kinds of information in complex problem solving tasks (Karlins, 1967; Streufert & Schroder, 1965) and was able to generate more different kinds of objectives (Linehart, 1969). An abstract person ordered the world more realistically and less stereotypically. In other words, he operated more in terms of multiple alternatives rather than in black and white categories (Harvey, Hunt, & Schroder, 1961) (Grover, 1980, pp. 31-32).

Hunt and others describe general characteristics of individuals at various levels of conceptual development indicated by scores on the Paragraph Completion Method (PCM). Those at a moderately low Cl are concerned with behaving in a manner which is socially acceptable. They evaluate things in a simple, concrete fashion. They are sensitive to authority figures and want to know what is expected of them. They are anxious for closure once a situation has been evaluated. At a higher CL, individuals are open to the ideas of others but are at the same time striving for independence. They are willing to consider alternatives and they possess increased tolerance for "uncertainty, ambiguity, and difference of opinion" (Hunt et al., 1978, p. 5). At the highest CL "The person considers and weighs alternatives, then decides upon the best possible solution to a particular problem . . . he will accept full responsibility for the consequences of his decision" (Hunt et al., 1978. pp. 5-6).

Conceptual level is developmental, i.e., subject to change over a period of time. While conceptual level can decrease from one measurement to the next, it generally increases from childhood to adolescence and through early adulthood (Hunt et al., 1978). CL does not change over short periods of time (Hunt et al., 1978).

Relationship Between Teachers' CL and
Teachers' Classroom Behaviors

Several studies investigating the relationships of teacher instructional performance with teacher CL have been conducted since the early body of knowledge concerning adult CL was formed. Teachers at a more abstract level have been found to differ from teachers at a more concrete level in terms of both teaching approach and teacher generated classroom atmosphere, with high CL teachers rated higher on what are generally considered to be more positive characteristics (such as warmth, perceptiveness, flexibility, ingenuity, task effectiveness, smoothness, and consistency) and low CL teachers rated higher on more educationally negative characteristics such as rule orientation, punitiveness, and anxiety (Harvey, White, Prather, Alter, & Hoffmeister, 1966).

Students of teachers of higher CL received higher ratings on positive characteristics such as cooperation, involvement, achievement and helpfulness, while students of teachers of low CL were observed to be more nurturance seeking and concrete in their responses (Harvey, Prather, White, and Hoffmeister, 1968). Students of higher CL teachers rated their teachers higher in positive characteristics, while students

of low CL teachers rated their teachers as fostering rigidity (Harvey, 1970). Teachers at a higher CL were more likely to utilize students' frame of reference and encourage questions and hypothesizing than were teachers at a lower CL (Hunt & Joyce, 1967). Teachers at a lower CL did more lecturing and asking of low level questions; while teachers of higher CL were more likely to help students theorize, explore, and express themselves (Murphy & Brown, 1970).

Higher CL teachers were involved in more informal professional development activities, interacted at higher cognitive levels, and engaged more frequently in constructive oral communication during lesson delivery than did lower CL teachers (Calhoun, 1986). Teachers of lower CL were more likely to stereotype students based on limited information, while teachers of higher CL were better able to integrate new information and make more informed decisions (Joyce, Lamb, & Sibol, 1966). Teachers of higher CL were rated higher in empathy than teachers of lower CL (Heck & Davis, 1973). Finally, teachers of higher CL were better able to master skills in teaching toward inquiry (Eggleston, 1977) and master a variety of teaching models (Joyce, Weil, & Wald, 1973) than were teachers of lower CL.

The Theory of Developmental Supervision

Glickman has proposed determining teachers' CL, then selecting the supervisory approach most appropriate for each teacher's developmental level. Glickman proposes that a supervisor initially use an actively nondirective approach with teachers of high CL, a collaborative approach with teachers of moderate CL, and an informational directive approach

with teachers of low CL (Glickman & Gordon, 1987). These matches represent the tactical dimension of developmental supervision (Gordon & Glickman, 1984).

Glickman provided broad definitions for each alternative approach:

> When a supervisor listens to the teacher, clarifies what the teacher says, encourages the teacher to speak more about the concern, and reflects by verifying the teacher's perceptions, then clearly it is the teacher who is in control. The supervisor's role is that of being an active prober or sounding board for the teacher to make his or her own decision. The teacher has high control and the supervisor low control over the actual decision. . . . this is seen as a nondirective interpersonal approach.
>
> When a supervisor uses nondirective behaviors to understand the teacher's point of view but then participates in the discussion by presenting his or her ideas, problem solving by asking all parties to propose possible actions, and then negotiating to find a common course of action satisfactory to teacher and supervisor, then the control over the decision is shared by all. This is viewed as a collaborative interpersonal approach.
>
> Finally, when a supervisor directs the teacher in what will be done, standardizes the time and criteria of expected results, and reinforces the consequences of action or inaction, then the supervisor has taken responsibility for the decision. . . . The supervisor is clearly determining the actions for the teacher to follow. These behaviors are called a directive interpersonal approach. (Glickman, 1985, p. 98)

A significant addition to the original theory of developmental supervision is the distinction between controlling behavior and informational behavior on the part of the supervisor. In terms of the nondirective approach and the collaborative approach, controlling behavior can be explained as feigning one of those approaches while attempting to manipulate the conference and the teacher. Glickman considers such manipulation to be unethical. The most critical distinctions between informational and controlling behaviors is made in Glickman's differentiation of informational directive behaviors and

controlling directive behaviors. When using informational directive behaviors, the supervisor offers perceptions and suggests future actions. In using controlling directive behaviors, the supervisor attempts to force the teacher to accept supervisor perceptions and control the teacher's future behaviors. Glickman maintains that the use of informational directive behaviors is normally more appropriate when a directive approach is required (Glickman, 1985).

In the strategic phase of developmental supervision, the supervisor attempts to foster the teacher's growth in CL and problem-solving ability by gradually reducing the degree of structure in interactions with the teacher, while gradually increasing the teacher's decision making responsibility. The developmental supervisor attempts to move gradually from an informational directive approach to a collaborative approach, and from a collaborative approach to an actively nondirective approach (Glickman & Gordon, 1987).

The concept of tactical matching of supervisory behaviors to teacher developmental levels is the basis of the study reported here. In this study, supervisors diagnosed teachers as being of a high, moderate, or low CL. They attempted to use actively nondirective approaches with teachers diagnosed as being of high CL, collaborative approaches with teachers thought to be of moderate CL, and informational directive approaches with teachers perceived to be of low CL.

There is a logical basis, supported indirectly by the research on CL, for using an informational directive approach with teachers of low CL, collaborative behaviors with teachers of moderate CL, and an actively nondirective approach with teachers of high CL. Teachers of

low CL, as indicated by the research on CL reported above, have difficulty defining problems, have fewer ways of responding to problems, and want to be shown what to do. The optimal training environment for individuals of low CL has been described as well structured, supportive, and fairly controlling (Joyce & Weil, 1980). Such an environment is similar to the environment created in a postobservation conference in which the supervisor uses an informational directive approach.

Teachers of moderate CL can define a problem and think of one or two possible solutions to a problem, but have trouble thinking through a comprehensive plan (Glickman, 1981). They are striving for independence and want to solve their own problems, but they usually seek out assistance from others either before or after initial efforts to solve a problem (Hunt et al., 1978).

A collaborative approach would allow a teacher at this stage to share his or her perceptions and offer some possible alternatives for future action, but also receive the benefit of supervisor perceptions and proposals. The negotiated action plan made during the collaborative conference would allow the teacher to meet needs of emerging independence. Such a teacher would have equal responsibility for formulating the plan, but would be given the moderate guidance needed for assurance that the plan would lead to real instructional improvement.

Teachers of high CL can think of a problem from many perspectives, generate a variety of alternative plans, choose the most appropriate plan, and think through each step of that plan (Glickman, 1981). They are more autonomous, explorative and creative (Noy & Hunt, 1972). In

the research on teacher CL and teacher behaviors, high CL teachers exhibited high levels of a wide variety of what are generally thought to be positive instructional behaviors. The personal and professional characteristics of high CL teachers are theoretically well suited for the teacher self-direction offered by the actively nondirective supervisory approach.

While logical matches can be made between teachers' CL and supervisory approaches, actual effectiveness and success of such matching must still be tested by research on supervisor-teacher interaction during implementation of the developmental model. Ginkel (1983) found no significant relationships between teachers' CL and their preferences for a nondirective, collaborative, or directive style. In this study, the focus of investigation was on supervisor and supervisee perceptions and valuation of interaction during attempts to match supervisor approach to supervisee CL during actual postobservation conferences.

Scope of the Study

This study was intended to be part of the initial phase of the classical research loop. It combined quantitative and qualitative methods in an effort to gather descriptive data concerning supervisors' efforts to implement developmental supervision.

Such an exploratory study is necessary for a number of reasons. First, there is the question of whether supervisors' diagnoses of supervisees' CL agrees with instrument-measured CL. It is unlikely that supervisors using developmental supervision will be allowed to

administer a paper and pencil test measuring teachers' CL and then base their supervisory behaviors on the results of that test. Ethical and legal considerations require that, if supervisors are going to use the various developmental approaches with different teachers, they base their choice of supervisory style on observed teacher behaviors. Problems in supervisor assessment of teacher CL were explored in this study.

Second, if there is to be effective implementation of developmental supervision, supervisors must be capable of exhibiting all three sets of supervisory behaviors called for by the model. This study analyzed participating supervisors' behaviors to ascertain whether or not they were able to display all three styles.

The first two questions stated here are "prerequisite" questions concerning implementation of developmental supervision. The third question is the "so what" question. Ultimately the query must be concerned with whether developmental supervision is more effective in the improvement of teachers' instructional performance than traditional supervision or other models of supervision. While a definitive answer to this question was beyond the scope of this study, a wide variety of descriptive data gathered during this investigation provided preliminary, tentative indicators of the model's effectiveness, and can serve as a basis for future research.

Research Questions

Five major research questions are listed below. An ancillary question that emerged during analysis for Research Question One also is presented.

Original Research Questions

1. To what extent do participating supervisors' diagnoses of participating supervisees' CL agree with PCM measures of supervisee CL?
2. Can participating supervisors effectively display an informational directive approach in one postobservation conference, a collaborative approach in a second postobservation conference, and an actively nondirective approach in a third postobservation conference?
3. Do supervisory approaches used by participating supervisors in developmental postobservation conferences match PCM-based prescriptions for supervisory approach?
4. What, if any, themes are present in participating supervisor valuations of
   a. informational directive, collaborative, and actively nondirective developmental postobservation conferences, compared with each other and with ineffective developmental postobservation conferences.
   b. matched developmental postobservation conferences compared with unmatched developmental postobservation conferences
   c. developmental supervision in general?
5. What, if any, themes are present in participating supervisee valuations of
   a. actively nondirective, collaborative, and informational directive developmental postobservation conferences, compared

with each other and with ineffective developmental postobservation conferences

b. matched developmental postobservation conferences compared with unmatched developmental postobservation conferences?

Ancillary Question

To what extent are individual supervisor descriptions of behaviors of supervisees diagnosed at various CLs consistent with the CL literature? This question is ancillary to Research Question One.

Definition of Terms

Developmental Postobservation Conference - A postconference carried out as part of this study.

Effective Developmental Postobservation Conference - A developmental postobservation conference in which the supervisor used the supervisory approach that he or she prescribed for the participating supervisee, regardless of the supervisee's PCM-measured CL.

Matched Developmental Postobservation Conference - A developmental postobservation conference in which the supervisory approach was the same as the PCM-based supervisory prescription for the participating supervisee. PCM-based supervisory prescriptions were: an informational directive approach for a supervisee at a low PCM-measured CL, a collaborative approach for a supervisee at moderate PCM-measured CL, and an actively nondirective approach for a supervisee at high PCM-measured CL.

Major Theme - A perception shared by over half of a group or subgroup of participants who expressed relevant thoughts on a particular topic of analysis.

Minor Theme - A perception shared by one-fourth to one-half of a group or subgroup of participants who expressed relevant thoughts on a particular topic of analysis.

Supervisor Training

Sixteen supervisors attended two three-hour workshops to prepare them for participation in the study. Workshop activities included the following:

1. Supervisors completed The Supervisory Beliefs Assessment (SBA). This instrument is self-scoring and allows a supervisor to ascertain his or her orientation toward supervision (directive, collaborative, or nondirective). Results of the SBA were interpreted and a discussion of the results was held. One interesting discovery during this discussion was that all 16 supervisors possessed either collaborative or nondirective orientations, with considerable disfavor expressed by supervisors for the directive approach.
2. Supervisors were provided an overview of the study and their role and functions in the study.
3. Research on teacher CL and relationships between teacher CL and teacher instructional performance was shared with the supervisors.
4. The basic phases of the clinical supervision cycle were discussed: preobservation conference, classroom observation, analysis and planning, postobservation conference, implementation of action plan, follow-up, and postcritique.

5. The "core components" of a postobservation conference were discussed: sharing of data and perceptions, setting an instructional improvement goal and objectives, developing an action plan for meeting the instructional improvement goal, and deciding on standards and methods for evaluating results of the instructional improvement effort.
6. Supervisors developed knowledge and skills in three approaches to instructional supervision--actively nondirective, collaborative, and informational directive--through participation in the following activities:
   a. a presentation by the investigator describing behaviors characteristic of each of three approaches and how those behaviors can be related to core components of the postobservation conference
   b. readings in each of the three approaches, including simulated scripts of each type of conference
   c. viewing of video tapes of simulated postobservation conferences in which each of the three supervisory approaches was demonstrated
   d. role playing, in which supervisors practiced each of the three approaches and received feedback on their performance.
7. Supervisors were briefed as to the activities they were to carry out as participants in the study.

Supervisor Field Activities

Major supervisor field activities consisted of tentative selection and induction of supervisees, and completion of a clinical cycle with each supervisee.

Tentative Selection and Induction of Supervisees

Tentative supervisor diagnoses of supervisees' CL were based on previous formal or informal observations of an interaction with potential supervisees. Supervisors chose three supervisees, discussed the study with the supervisees in general terms, and invited them to participate in the study. The supervisors invited one supervisee tentatively diagnosed as being of high CL, one of moderate CL, and one of low CL, to participate.

Clinical Cycles

The version of clinical supervision selected for the study consisted of seven phases: preobservation conference, classroom observation, analysis and planning, postobservation conference, implementation of action plan, follow-up, and supervisor-supervisee postcritique.

Preobservation conferences. During separate preobservation conferences supervisors and supervisees agreed on what class the supervisee would be teaching when observed, what type of data would be collected, methods of data collection, the date and time of observation, and the date and time of the postobservation conference.

Classroom observations. The supervisors observed each of their supervisees teaching a lesson. Supervisors collected two types of data during classroom observations: the data agreed on during the preobservation conferences, and any additional data needed by supervisors to assist them in making final diagnoses of teacher CL. Supervisors summarized both types of data in logs they kept throughout the field activities.

Analysis and planning. The analysis and planning phase consisted of three activities: data interpretation, final diagnosis of teacher CL, and planning for the postobservation conference. Final diagnosis of supervisee CL was based on supervisor-supervisee interactions during the preobservation conference, the classroom observation, and any other formal or informal interactions with, or observations of, the supervisee by the supervisor since the supervisee's induction into the study.

Provisions had been made during supervisor training for the eventuality of a supervisor's final diagnosis being different from the preliminary diagnosis. First, the supervisor was to examine any possibility that one of the other supervisees had been tentatively misdiagnosed in a manner that would allow the two teachers in question to "switch places" in terms of CL diagnosis and prescribed supervisory approach.

If a final diagnosis of supervisee CL was different from the initial diagnosis and switching diagnoses prior to holding postobservation conferences was not an option, then the supervisor was to eliminate the supervisee in question from the study and recruit a new volunteer. The purpose of this replacement was to provide final

diagnoses of one supervisee of low CL, one supervisee of moderate CL, and one supervisee of high CL; and to allow the supervisor to attempt each of the three supervisory approaches with one supervisee. For ethical reasons, supervisors were asked to hold postobservation conferences with any supervisees eliminated from the study proper, but to collect no additional data on such individuals. None of the supervisors in the study reported the need to eliminate any of the original supervisees from the study.

Supervisors reported their final diagnoses of supervisees' CL, along with descriptions of supervisee behaviors on which the diagnoses were based. Supervisors were told that all observations of supervisee behaviors that were reported had to be firsthand.

The last part of the analysis and planning phase consisted of supervisors planning for postobservation conferences. The format of written plans varied according to the approach attempted in the postobservation conference. The purpose of each plan was the same: to use the selected approach (informational directive, collaborative, or actively nondirective) to work with the supervisee in devising an action plan aimed at improving the supervisee's instructional performance.

Postobservation conferences. During separate postobservation conferences supervisors attempted to use the prescribed approach (informational directive, collaborative, or actively nondirective) with each supervisee. The conferees discussed data and perceptions relative to the observed lesson and any instructional problems being experienced by the teacher, set an instructional improvement goal and objectives, and designed an action plan for meeting the objectives. The

participants also planned follow-up activities for determining whether or not the objectives were met; and set a date, time, and location for the postcritique. Postobservation conferences were recorded on audio tape.

Implementation of action plans. Action plans were implemented through supervisors and supervisees carrying out actions agreed to during postobservation conferences. Supervisors reported on each supervisee's level of cooperation in working toward instructional improvement objectives.

Follow-ups. The purpose of the follow-ups was to collect data to determine whether or not each instructional improvement objective was met. In some cases the supervisee collected data, then reported the data to the supervisor. In some cases the supervisor collected that data, then shared the data with the supervisee. Finally, in some cases the supervisee and supervisor collected data independently, then shared data with each other. Regardless of the nature of the follow-up, it was the responsibility of the supervisor to make the final determination of whether or not each instructional improvement objective was met, and to describe for the investigator how the determination was made.

Supervisor-Supervisee Postcritiques

Separate postcritiques were usually held within two weeks following postobservation conferences. The postcritique (sometimes called the postanalysis) typically provides the supervisor the opportunity to receive feedback on his or her own performance during the clinical cycle. In this study the postcritique was modified to emphasize supervisee feedback on the postobservation conference.

Data Collection

Research Question One

Question One was concerned with whether or not supervisor diagnoses of supervisees' CL agreed with Paragraph Completion Method (PCM) measures of supervisees' CL. The PCM was administered to all participating supervisees. Supervisors were not made aware of supervisee PCM scores. For the ancillary question, written supervisor descriptions of supervisee behaviors that supervisors had observed while diagnosing supervisees' CL were required.

Research Question Two

Question Two was concerned with whether or not supervisors could display all three developmental approaches (informational directive, collaborative, and actively nondirective). All postobservation conferences were recorded on audio tape, making possible a systematic analysis of the supervisory approach used during each conference.

Research Question Three

Question Three was concerned with the extent to which supervisors' approaches matched PCM-based prescriptions for supervisory approach. This question was answered by comparing data collected for Question One (supervisees' PCM scores) with data collected for Question Two (supervisor approaches used during each postobservation conference).

Research Question Four

Question Four was concerned with comparison of supervisor valuations of informational directive, collaborative, actively nondirective, and ineffective supervisory approaches; and supervisor valuation of developmental supervision in general. Supervisor responses

to open-ended questions asking for their perceptions of each of the various approaches and developmental supervision made up one data source for this question. Supervisor responses on an instrument asking for their perceptions of the extent to which instructional improvement objectives were met by participating supervisees made up another data source.

Indicators of valuation discussed by the supervisors relative to each of the three supervisory approaches included supervisors' perceptions of:

1. appropriateness of approach
2. supervisor effectiveness in implementing the approach
3. supervisor feelings during conference
4. clarity of communication during conference
5. supervisee response during conference
6. supervisee response following conference
7. likelihood of the supervisor using the approach in future conferences.

Indicators of valuation discussed by the supervisors relative to developmental supervision in general included:

1. general evaluation of the developmental model
2. discussion of rival explanations for perceived success or failure of developmental supervision
3. likelihood of the supervisor using developmental supervision in the future.

On the evaluation instrument asking supervisors to determine whether or not instructional improvement objectives were met,

supervisors were directed to list improvement objectives in observable, measurable terms. Supervisors were required to describe procedures they used to determine if improvement objectives were met.

Research Question Five

Question Five was concerned with supervisee valuation of informational directive, collaborative, actively nondirective, and ineffective developmental postobservation conferences. There were three sources of data relative to this question: supervisee written responses to open-ended written questions, supervisee ratings of developmental conferences on a semantic differential rating scale, and oral responses made by supervisees during supervisor-supervisee postcritiques.

Items on the written instrument entitled Open-Ended Questions on Supervisee Perceptions of Postobservation Conference with Participating Supervisor (PPS) included request for supervisee perceptions of:

1. How the conference compared to what the supervisee expected
2. The extent to which the supervisee was likely to change his or her teaching behavior as a result of the conference
3. The extent to which the supervisee was likely to improve his or her teaching as a result of the conference
4. Supervisor feelings during the conference and perceived reasons for those feelings.

The semantic differential rating scale was a modification of a bipolar scale developed by Copeland and Atkinson (1978). For this study it was labeled Rating Scale for Postobservation Conference with Participating Supervisor (RCPS). The RCPS directed participating supervisees to rate each developmental postobservation conference on ten

indicators. These indicators were (a) value of time spent in conference, (b) supervisor's expertise, (c) supervisor's comprehension of the instructional problem, (d) clarity of communication, (e) productivity of conference, (f) supervisor's ability to help, (g) supervisor's genuineness, (h) how the conference made the supervisee feel, and (j) overall satisfaction with the conference. Ratings were made on an eight-point scale. Because of the limited number of participants involved in any one type of conference, quantitative data derived from this scale was viewed as supplemental to the qualitative data gathered for this question.

Oral questions asked supervisees during supervisor-supervisee postcritiques (which followed postobservation conferences and implementation of the action plans) addressed the following topics:

1. Supervisee satisfaction with the supervisor's approach during the postobservation conference.
2. Whether or not the supervisee discovered anything new about his or her teaching during the postobservation conference.
3. Whether or not the action plan that was developed during the postobservation conference improved the supervisee's teaching.
4. What ways the supervisor could change his or her supervisory style to be of greater help to the supervisee.

Supervisor-supervisee postcritiques were recorded on audio tape, allowing analysis of supervisee responses.

Data Analysis

Research Question One

Question one was concerned with whether or not supervisor perceptions of supervisees' CL agreed with PCM measures of supervisees' CL. PCM scores were converted to a low, moderate or high instrument-measured CL for each supervisee. Supervisors' diagnoses of supervisees' CL were then compared with PCM measures. This comparison yielded a coefficient of agreement of supervisor diagnoses with PCM-measured CL. An ancillary question relative to Research Question One was concerned with comparing supervisor descriptions of supervisee behaviors with descriptions found in the literature of behaviors of teachers at various conceptual levels. Consistency of supervisor descriptions of supervisee behaviors with the CL literature was quantified by calculating a consistency coefficient.

Research Question Two

For Question Two, tape recordings of developmental postobservation conferences were analyzed using the Supervisor-Teacher Interaction Analysis System (STIAS) (see Appendix A). The predominant supervisory approach used in each conference was identified, then compared to the supervisor's prescription to determine whether or not the supervisor had effectively implemented the prescribed approach. An overall effectiveness coefficient for the 47 postobservation conferences was determined.

Research Question Three

For Question Three, PCM-measured CLs were converted to PCM-based prescriptions for supervisory approach. PCM-based prescriptions were

then compared to approaches actually used by supervisors during developmental postobservation conferences. A ratio of matched conferences to the total number of conferences was calculated.

Research Question Four

Question Four, Part One, was concerned with supervisor valuation of informational directive, collaborative, actively nondirective, and ineffective developmental postobservation conferences. For each of seven indicators of supervisor valuation, major and minor themes within supervisor perceptions of informational directive, collaborative, actively nondirective, and ineffective developmental postobservation conferences were identified, then compared with each other. Additionally, for each indicator, each supervisor's overall evaluation was classified into one of several categories for that indicator. For each of the seven indicators, supervisors' perceptions of each approach were assigned numerical values from one to seven, and group means of numerical values for each supervisory approach were compared. Finally, individual and overall outcome scores based on supervisor perceptions of supervisee progress toward instructional improvement objectives were calculated for each supervisory approach, then compared.

For Question Four, Part Two supervisor perceptions of matched and unmatched developmental postobservation conferences were identified. This was done by using the same seven indicators, analysis codes, categories, and numerical values that were used in analysis for the first part of Question Four. The data was simply redistributed to new matrices, yielding new themes, classification tallies, group means, and

outcome scores. Supervisor perceptions of matched and unmatched developmental conferences were then compared.

For Question Four, Part Three, different data was analyzed. Three indicators of supervisors general evaluation of developmental supervision were examined. Using the same basic processes used for the first two parts of Question Four, major themes and minor themes were identified. Also, for each indicator, each supervisor's overall evaluation was classified into a single category.

Research Question Five

Question Five, Part One, called for comparing supervisee valuations of informational directive, collaborative, actively nondirective, and ineffective developmental postobservation conferences. Supervisee's written and oral perceptions were analyzed separately. The first four indicators of supervisee valuation were derived from written responses to open-ended questions on the PPS. For each indicator, major and minor themes, classifications of each supervisee's overall evaluation, and numerical values assigned to overall supervisee perceptions were compared.

The fifth indicator for Question Five, Part One, concerned responses to the RCPS (the bipolar semantic differential rating scale). Item and overall group means for ratings of the four types of conferences were compared.

Indicators six through nine concerned supervisee oral responses to supervisor questions during the postcritique. For each of these four indicators, themes, each supervisee's overall evaluation, and numerical values assigned to overall evaluations of informational directive,

collaborative, actively nondirective, and ineffective approaches were compared. The final phase of analysis for Question Five, Part One, consisted of comparing data displays across the three different sources of data (PPS, RCPS, and postcritiques).

For Question Five, Part Two, existing data was redisplayed to compare supervisee valuations of matched and unmatched developmental postobservation conferences. For each of the PPS and postcritique indicators, themes were identified, overall supervisee evaluations were classified, and group means of numerical values assigned to each supervisee's overall evaluation were calculated. Also, RCPS item and overall group means for matched and unmatched conferences were calculated. The newly processed data on matched and unmatched developmental postobservation conferences were then compared within the four PPS indicators, the RCPS indicator, and the four postcritique indicators. The final phase of data analysis for Question Five, Part Two, consisted of comparing data displays across the three sources of data (PPS, RCPS, and postcritiques).

The final phase of data analysis for the study consisted of comparing supervisor and supervisee valuations of the various supervisory approaches used in developmental postobservation conferences, and drawing final conclusions across all five research questions.

Results

Research Question One

Question One was: "To what extent do participating supervisors'

diagnoses of participating supervisees' CL agree with supervisees' PCM-measured CL?"

Fifteen supervisees were diagnosed as teachers of low CL. This was due to the fact that one of the 16 supervisors did not make a low CL diagnosis. PCM measurements agreed with only two of the 15 low CL diagnoses. Nine of the supervisees diagnosed at low CL were measured at moderate CL by the PCM. The four remaining supervisees diagnosed at low CL received high PCM-measured CL scores.

Sixteen supervisees were diagnosed as teachers of moderate CL. Ten of these teachers received moderate PCM-measured CL scores. One of the supervisees diagnosed at moderate CL was of low PCM-measured CL. The remaining five supervisees diagnosed at moderate CL received high PCM-measured CL scores.

Sixteen supervisees were diagnosed as teachers of high CL. Seven of these teachers were of high PCM-measured CL. The remaining nine supervisees diagnosed at high CL received moderate PCM-measured CL scores. Supervisors' diagnoses of supervisees' CL and PCM-measured supervisee CL scores are summarized and compared in Table 1. Asterisks precede numerals representing totals within supervisor diagnosis-PCM agreement clusters.

The ancillary question relative to Question One was: "To what extent are individual supervisor descriptions of behaviors of supervisees diagnosed at various CLs consistent with the CL literature?" Comparison of supervisor descriptions of supervisee behaviors with the CL literature showed an .851 overall consistency coefficient. This consistency coefficient contrasts with the .404 agreement coefficient

Table 1

Comparisons of Supervisors' Diagnoses of Supervisees' CL with PCM Measures of Supervisees' CL

PCM Measures of Supervisees' CL, Broken Down According to Supervisors' Diagnoses	Supervisors' Diagnoses, Broken Down According to PCM Measures of Supervisees' CL		
	Low Diagnoses (15)	Moderate Diagnoses (16)	High Diagnoses (16)
Low Scores (3)	*2	1	0
Moderate Scores (28)	9	*10	9
High Scores (16)	4	5	*7

*Total of Supervisor Diagnosis-PCM Agreements Within a Given Category

found when supervisor diagnoses were compared with PCM-measured supervisee CLs during data analysis for the primary research question.

Research Question Two

Question Two asked if supervisors could display all three developmental approaches; informational directive, collaborative, and actively nondirective, in postobservation conferences with three different supervisees.

Fourteen audiotapes of supervisors attempting to use the informational directive approach were analyzed using the STIAS (see Appendix A). One of the 16 supervisors reported that no supervisee at low CL could be located. One audiotape of a supervisor attempting to

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display an information directive approach was never received by the investigator. This postobservation conference was not considered when calculating an effectiveness coefficient for attempted informational directive conferences.

Based on the STIAS, 13 of the 14 supervisors who conducted conferences on audiotapes received by the investigator effectively displayed predominantly informational directive approaches, a .928 effectiveness coefficient. The remaining supervisor displayed a mixture of supervisory behaviors. All 16 of the supervisors effectively displayed collaborative approaches in the postobservation conferences, a 1.000 effectiveness coefficient.

Seventeen audiotapes of supervisors attempting to implement actively nondirective postobservation conferences were analyzed. The extra conference was the result of one supervisor attempting to implement two separate actively nondirective conferences. Twelve of 17 attempts at actively nondirective supervision were effective, a .706 effectiveness coefficient. One approach was predominantly passively nondirective. Three approaches were predominantly collaborative. One approach was mixed.

Overall, 41 out of 47 developmental postobservation conferences were effective, an overall .872 effectiveness ratio.

Research Question Three

Question Three was: "Do supervisory approaches used by participating supervisors in developmental postobservation conferences match PCM-based prescriptions for supervisory approach?" Two supervisors implemented planned informational directive supervisory

approaches that matched PCM-based prescriptions for supervisory approach. Eleven supervisors implemented planned collaborative supervisory approaches matching PCM-based prescriptions, and two supervisors who had planned nondirective supervisory approaches actually carried out collaborative supervisory approaches matching PCM-based prescriptions. Seven supervisors implemented planned actively nondirective supervisory approaches that matched PCM-based prescriptions. Overall, the supervisory approaches displayed in 22 of 47 developmental postobservation conferences matched PCM-based prescriptions for supervisory approach, a .468 ratio of matches to total number of postobservation conferences.

Research Question Four

Question Four, Part One, was concerned with supervisor valuations of informational directive, collaborative, actively nondirective, and ineffective supervisory approaches. Supervisor perceptions of the three different types of effective approaches and the ineffective approaches were compared. Major themes emerging from coding of supervisor perceptions across the seven open-ended indicators were generally positive. The majority of supervisors stated that all three of the effective approaches were appropriate for the supervisees they were used with, were perceived as effectively implemented, allowed clarity of communication, and resulted in positive supervisee responses during and after the postobservation conference.

Some themes were unique to one of the three approaches. One minor theme was that the actively nondirective approach was difficult to implement. A majority of supervisors effectively implementing the

informational directive approach said they felt uncomfortable while doing so. Effective informational directive supervisors were split as to whether they would initially use the informational directive approach in the future; or try another approach first, then use the informational directive approach later if necessary.

Means of numerical values assigned to each supervisor's overall perceptions for each relevant indicator revealed a general pattern of highest values for the collaborative approach, second highest values for the actively nondirective approach, and third highest values for the informational directive approach. This pattern was broken for clarity of communication, with actively nondirective ranked highest, followed by informational directive, then collaborative.

Compared to supervisor perceptions of effective conferences, supervisors involved in ineffective conferences had mixed and generally less positive perceptions of the ineffective conferences. Group means of numerical values assigned to each supervisor's overall evaluation of ineffective approaches were lower than means assigned to overall perceptions of the three effective approaches for each open-ended indicator to which numerical values were assigned.

For indicator eight, means of outcome scores assigned to supervisor reports on supervisee progress toward meeting instructional improvement objectives were highest for the actively nondirective approach, second highest for the collaborative approach, third highest for the informational directive approach, and lowest for ineffective conferences. These rankings remained the same when outcome scores were weighted for difficulty of improvement objectives. Table 2 reviews the outcome scores assigned to each supervisory approach.

Table 2

Means of Outcome Scores Assigned to Informational Directive, Collaborative, Actively Nondirective, and Ineffective Supervisors' Perceptions of Progress Toward Instructional Improvement Objectives

Supervisor Effectiveness Category	Means of Outcome Scores for Supervisor Effectiveness Categories	
	Mean of Raw Scores	Mean of Scores Weighted for Degree of Difficulty of Objectives
Informational Directive (13)[a]	1.417	2.028
Collaborative (16)[a]	1.744	2.433
Actively Nondirective (12)[b]	1.900	2.833
Ineffective (6)[a]	1.200	1.300

[a]Outcome scores could not be calculated for one of these conferences.

[b]Outcome scores could not be calculated for two of these conferences.

Question Four, Part Two, was concerned with comparing supervisor perceptions of matched developmental postobservation conferences with supervisor perceptions of unmatched conferences. Themes found within the seven open-ended indicators showed generally positive perceptions of both matched and unmatched conferences. Two major themes were present in perceptions of matched conferences and not present in unmatched

conferences. They were that supervisors felt comfortable during the matched conferences, and that supervisors involved in matched conferences would use the same approaches even in initial postobservation conferences with supervisees.

Minor themes present in perceptions of matched conferences and not present in perceptions of unmatched conferences were that the approach was difficult to implement, and the supervisor felt effective during the conference. Some of the minor themes present in perceptions of unmatched conferences not present in perceptions of matched conferences were feelings of discomfort, nervousness, and frustration. Perceptions that the supervisee was responsive, clarity of communication was outstanding, the supervisee desired future conferences of the same type, and the supervisor would try another approach before trying the approach, were additional minor themes present only within supervisor perceptions of unmatched conferences.

Classification of each supervisor's overall evaluation for each of the seven open-ended indicators showed generally positive responses to both matched and unmatched conferences. The greatest contrasts between perceptions of matched and unmatched conferences revealed by these classifications were that more supervisors felt comfortable during matched than during unmatched conferences, and that most of the supervisors involved in matched conferences said they would have no reservations about using the matched approach in future conferences. Over a third of the supervisors involved in unmatched conferences said they would try another approach before trying the approach attempted in the unmatched conference.

Means of numerical values assigned to supervisors' overall evaluations for open-ended indicators were higher for matched conferences across all but one of the indicators. Unmatched conferences had a higher mean only for the clarity of communication indicator.

For indicator eight, means of outcome scores assigned to supervisor reports on supervisee progress toward meeting instructional improvement objectives were higher for matched conferences than for unmatched conferences, whether means of raw outcome scores or scores weighted for difficulty of instructional improvement were considered. Table 3 reviews the outcome scores assigned to matched and unmatched conferences.

Question Four, Part Three, was concerned with supervisors' general evaluation of developmental supervision and was answered through examination of indicators nine through eleven. Indicator nine revealed that most of the supervisors gave developmental supervision either an extremely or a generally positive evaluation.

Indicator ten showed that most of the supervisors who responded considered both the developmental approach and the problem-solving approach used in the postobservation conferences to be equally vital to conference success. It showed that supervisors were split between the perception that the developmental approach and a helping, nonevaluative relationship were equally important; and the perception that the developmental approach was more important than a helping, nonevaluative relationship. Finally, indicator ten revealed that most of the supervisors who responded considered the developmental approach to be more important to conference success than the supervisor's role, whether

Table 3

Means of Outcome Scores Assigned to Perceptions of Supervisee Progress Toward Meeting Instructional Improvement Objectives Reported by Supervisors Involved in Matched and Unmatched Conferences

	Means of Outcome Scores	
Type of Conference	Mean of Raw Scores	Mean of Scores Weighted for Degree of Difficulty of Objectives
Matched (22)[a]	1.817	2.717
Unmatched (25)[b]	1.446	1.879

[a]Outcome scores could not be calculated for two of these conferences.

[b]Outcome scores could not be calculated for three of these conferences.

that role was a regular line supervisor, regular staff supervisor, or peer supervisor. Indicator eleven revealed that 13 of the 16 supervisors would use developmental supervision in the future, but that eight of those 13 supervisors would modify the developmental model in various ways. The remaining three supervisors stated that they would use only two of the three approaches used in developmental supervision during future postobservation conferences.

Research Question Five

Question Five, Part One, was concerned with supervisee valuation

of informational directive, collaborative, actively nondirective, and ineffective developmental postobservation conferences.

After the developmental postobservation conference, majorities of supervisees who had been involved in informational directive and collaborative conferences reported on the PPS (open-ended written responses) that the approach had been generally helpful, with the helpfulness perception only a minor theme among supervisees who participated in actively nondirective conferences. Mean ratings on the RCPS (semantic differential) item most relative to these themes, "supervisor's ability to help during conference," was consistent with the PPS themes, with higher RCPS means for the informational directive approach (6.231 on an eight-point scale) and collaborative approach (6.400) than for the actively nondirective approach (5.750). During the supervisor-supervisee postcritiques at the end of the developmental-clinical cycles, however, majorities of all three groups said the supervisory approach was generally helpful.

Majorities from all three groups of supervisees who were involved in effective postobservation conferences said after the postobservation conference that they were likely to significantly change, and improve, their teaching behavior as a result of the conference. These major PPS themes were consistent with high group means for all three approaches on the RCPS item "productivity of conference," which were 6.077, 6.133, and 6.000 for the informational directive, collaborative, and actively nondirective conference respectively. In the postcritique (open-ended oral responses) majorities of supervisees involved in informational directive and collaborative postobservation conferences reported their

teaching had improved. Supervisees who had participated in actively nondirective postobservation conferences were split between reporting specific examples of improvement and reporting that major improvement was still anticipated.

Majorities of all three groups involved in effective postobservation conferences gave reports on the PPS of generally positive feelings during the conference. These results are consistent with means for the RCPS item "supervisee feelings as result of conference," with each mean greater than six on an eight-point scale.

In terms of other postcritique indicators, the majority of supervisees involved in each of the three types of effective conferences expressed appreciation for the developmental postobservation conference and recommended no changes in the supervisor's approach. The only majority that praised a supervisory approach explicitly belonged to the group involved in informational directive conferences. These supervisors praised the informational directive approach explicitly both in writing after the postobservation conference (on the PPS) and orally during the postcritique.

Means of numerical values assigned to supervisee perceptions expressed on the PPS and during the postcritique were relatively high for all three types of effective conferences, with PPS means ranging from 5.667 to 6.467 and postcritique means ranging from 5.250 to 6.667 on seven-point scales. The RCPS, while yielding high overall means for all three effective approaches (ranging from 6.058 to 6.430 on an eight-point scale), did result in higher means for the collaborative approach on seven out of ten items. The highest RCPS overall mean was assigned

to the collaborative conferences (see Appendix B for all RCPS group means for Question Five, Part One).

Results across PPS, RCPS, and postcritique indicators were more definitive relative to supervisee valuation of ineffective developmental postobservation conferences. Indicators within each of these data sources showed a clear pattern of lower valuations for ineffective conferences than for any of the three types of effective conferences. The fact that only six supervisees participated in ineffective conferences limits the inferences that can be drawn from these results.

For Question Five, Part Two, supervisee valuations of matched and unmatched developmental postobservation conferences were compared. After the postobservation conference, the statement that the conference approach was helpful was a major theme running through perceptions of matched developmental postobservation conferences and a minor theme within perceptions of unmatched developmental postobservation conferences, although the helpfulness theme was very nearly a major theme for the unmatched conferences as well. The RCPS item most directly related to the PPS helpfulness perception contained the item "supervisor's ability to help during conference." The group mean for matched developmental conferences for this RCPS item was 6.045 on an eight-point scale. The group mean for unmatched developmental conferences for the same item was 5.883. The supervisee statement that the conference approach was helpful became a major postcritique theme within supervisee perceptions of both matched and unmatched developmental conferences.

Major themes for both matched and unmatched developmental postobservation conferences expressed by supervisees completing the PPS were that the conference was likely to significantly change, and improve, the supervisee's teaching. The RCPS item most relative to the "change" and "improvement in teaching" themes was the "productivity of conference" item. The group mean for matched developmental conferences for this RCPS item was 6.045. The group mean for unmatched developmental conferences for the same item was 5.883. Majorities of the supervisees who participated in matched and unmatched developmental conferences stated during the postcritique that improvement in teaching had taken place as a result of the action plan designed during the developmental conference.

A major PPS theme within supervisee perceptions of both matched and unmatched developmental postobservation conferences was that the supervisee experienced generally positive feelings during the conference. The PPS data can be compared to the RCPS item "supervisee feelings as a result of conference." The group mean for the RCPS "feelings" item was 6.364 for matched developmental conferences and 6.208 for unmatched developmental conferences.

In terms of additional PPS and postcritique indicators, the statement that the supervisee appreciated the supervisor's suggestions was a major theme within supervisee perceptions of unmatched developmental postobservation conferences expressed on the PPS, but a minor theme within supervisee perceptions of unmatched conferences expressed during the postcritique. Appreciation for supervisor suggestions was not a theme within supervisee perceptions of matched

developmental conferences expressed on the PPS or during the postcritique. Explicit praise for the specific supervisory approach was a minor theme within supervisee perceptions of matched and unmatched developmental conferences expressed on the PPS, but was a minor theme only within supervisee perceptions of unmatched developmental conferences expressed during the postcritique. The majority of supervisees who participated in matched and unmatched developmental conferences said they discovered something about their teaching. The majority of supervisees involved in matched and unmatched developmental conferences recommended that no changes be made in the supervisor's approach.

Group means of numerical values assigned to supervisee perceptions were slightly higher for matched developmental postobservation conferences than for unmatched developmental conferences for each of the PPS and postcritique indicators. Finally, group means of numerical values assigned to RCPS responses were slightly higher for matched than for unmatched developmental postobservation conferences on eight of the ten semantic differential rating scales (see Appendix C).

Conclusions

Principal conclusions drawn from results of this study can be stated as follows:

1. Supervisor diagnoses of supervisee CL tended to disagree with PCM-measured CL (.404 agreement coefficient). Supervisor descriptions of supervisee behaviors, however, were generally consistent with behavioral descriptions of teachers at

different CLs found in the literature (.851 consistency coefficient).

2. Ten of sixteen supervisors showed extensive flexibility by effectively displaying all three developmental approaches during postobservation conferences. Five additional supervisors showed some flexibility by effectively implementing two of the three developmental approaches. The fact that 87.2% of all attempted approaches were implemented suggested that supervisors were generally highly effective during the developmental postobservation conferences. Results showing that 92.8% of attempted informational directive approaches were implemented and 100% of attempted collaborative approaches were implemented indicated that supervisors were extremely effective at displaying those approaches. The fact that 70.6% of attempted actively nondirective approaches were implemented indicated more difficulty with effectively displaying that approach. The ineffectiveness of some supervisees at implementing the actively nondirective approach may be due to insufficient supervisor training in use of the actively nondirective approach, rather than a lack of supervisor potential to implement the approach.
3. The 46.8% of developmental approaches that matched PCM-based prescriptions for supervisory approach represented a low level of matched developmental approaches. This low level of matches was primarily due to differences between supervisor

diagnoses of supervisee CL and PCM-measured supervisee CL, rather than ineffective supervisory approaches.

4. Supervisors expressed positive valuations of all three types of developmental approaches. Supervisors valued actively nondirective approaches somewhat more than informational directive approaches, and collaborative approaches somewhat more than actively nondirective approaches. Supervisors valued all three types of effective developmental approaches considerably more than ineffective developmental approaches.
5. Supervisors expressed highly positive valuations for both matched and unmatched developmental approaches, but valued matched developmental approaches slightly more than unmatched developmental approaches.
6. Supervisors expressed positive valuations of developmental supervision in general.
7. Supervisees expressed highly positive valuations of all three types of developmental approaches. Supervisees valued informational directive approaches slightly more than actively nondirective approaches, and collaborative approaches slightly more than informational directive approaches. Supervisees valued effective developmental approaches considerably more than ineffective developmental approaches.
8. Supervisees expressed highly positive valuations for both matched and unmatched developmental approaches, but valued matched developmental approaches slightly more than unmatched developmental approaches.

Comparison of Supervisor and Supervisee Perceptions

The comparisons and interpretations presented here are most directly concerned with Research Questions Four and Five, but also relate to the other research questions. One conclusion drawn from comparisons of supervisor and supervisee perceptions was that both supervisors and supervisees expressed positive valuations of all three effective developmental approaches (informational directive, collaborative, and actively nondirective), and considerably less positive valuations of ineffective developmental approaches. Also, supervisors and supervisees expressed their highest valuations for the collaborative approach.

Supervisors expressed their second most positive valuations for the actively nondirective approach and their third most positive valuations for the informational directive approach. In contrast, supervisees expressed their second most positive valuations for the informational directive approach and their third most positive valuations for the actively nondirective approach.

Supervisees' valuations of the informational directive approach were more positive than supervisors' valuations of the same approach. Supervisors had expressed negative perceptions of the informational directive approach during the supervisor training sessions. Thus, supervisors may have valued the informational directive approach less positively than the other two effective approaches because of their previous bias against the informational directive approach, rather than supervisee response to the approach. The higher valuations of the

informational directive approach by supervisees lends some support to this proposition. The alternative explanation that supervisors valued the informational directive approach less positively than the other effective approaches because nearly all of the informational directive approaches were unmatched is not supported by the higher supervisee valuations of the informational directive approach. In fact, one could assume that a truly "mismatched" set of informational directive approaches would receive far less positive evaluations by supervisees and supervisors than the informational directive approaches in this study received.

In terms of perceptions of matched approaches compared to perceptions of unmatched approaches, both supervisors and supervisees expressed slightly higher valuations of matched approaches. How participating supervisor and supervisee valuations of the various supervisory approaches are interpreted in relation to the theory of developmental supervision depends to a large extent on the way one defines a truly matched conference. If a matched conference is defined as a conference in which the supervisor's approach is matched with the supervisee's PCM-measured CL, then one would compare valuations of matched developmental to unmatched developmental conferences to test the developmental theory. This would mean that matching supervisory approach with supervisee CL may have produced the slightly more positive supervisor and supervisee valuations of matched conferences compared to unmatched conferences in this study.

Another definition is that a match occurs when a supervisee identifies supervisee behaviors that are consistent with low, moderate,

or high CL functioning reported in the literature, then effectively matches supervisory approach to perceived situation-specific supervisee CL. While this type of match is admittedly more difficult to validate, it is probably more practical in--and more applicable to--the real world of teachers and supervisors. If this view is taken, then the major differences in this study between supervisor/supervisee valuations of effective developmental approaches and ineffective developmental approaches could be explained by the match of supervisory approach to situation-specific supervisee CL, although rival explanations could not be entirely ruled out as a result of this study alone.

A third definition of a match takes a "results-only" view. If the approach worked--if instructional improvement objectives were met, if the supervisor and supervisee expressed highly positive valuations of the approach--then the approach was a "good" match. The extension of this to a future study would be that the approach that worked better than other approaches with a supervisee would be the "best" match for that supervisee, regardless of the instrument-measured CL, or even the supervisor's descriptions of supervisee pre-conference behaviors. Using this results-only definition, it could be concluded that in this study nearly all effective informational directive, collaborative, and actively nondirective conferences were "good" matches, while most ineffective developmental conferences were "fair" or "poor" matches.

Regardless of which definition of matching is accepted, future research is necessary to determine with certainty the extent to which use of alternative supervisory approaches can improve educational supervision and teachers' instructional performance.

Recommendations for Future Research

Implications and recommendations for future research are discussed under the categories of future studies on (a) the tactical and (b) the strategic dimensions of developmental supervision. Future tactical studies, like the study reported here, would examine results of attempts at contemporaneous matching of supervisory approach with supervisee CL aimed at solving immediate instructional problems. Future strategic studies would examine results of attempts at developmental matching of supervisory approach with supervisee CL aimed at increasing the supervisee's CL, problem solving ability, and self-direction.

Future Studies on the Tactical Dimension of Developmental Supervision

The investigator recommends that future research on the tactical dimension of developmental supervision focus on supervisor diagnoses of supervisee CL, comparison of results of the three effective developmental approaches, and comparison of results of clearly matched and mismatched conferences.

One improvement on the study reported here might be to have a team of experts on teacher CL observe and interact with supervisees after the supervisors have made their diagnoses of supervisees' situation-specific CL. The experts also would diagnose the supervisees' situation-specific CL. Supervisees' CL would still be measured by the PCM. Supervisors would not be made aware of expert or PCM measures of supervisee CL. Both expert- and PCM-measured supervisee CL could be compared to supervisor diagnoses of supervisee CL. The use of expert opinion on supervisees' situation-specific CL could go a long way toward resolving the issue of

the accuracy of supervisor diagnoses of supervisee CL brought forward by the disagreements of supervisor diagnoses with PCM measures found in this study.

Another improvement on the study reported here would be to have experts on evaluation of instruction measure the improvement of supervisee instructional performance resulting from implementation of action plans designed during developmental postobservation conferences. This would mean more objective determinations of instructional improvements resulting from various supervisory approaches, matches, and mismatches. Supervisor and supervisee valuations of the various types of postobservation conferences could provide additional outcome measures.

A second possible study would have experts on teacher CL visit participating schools prior to supervisors' entry into the study. The experts would select one supervisee clearly of low CL, moderate CL, and high CL, both in terms of instrument-measured CL and the general educational situation (subject matter taught, students, and so on) the supervisor and supervisee would be discussing during the developmental-clinical cycle. Supervisors would not be told that there was one supervisee of each CL, and would have to diagnose the CL of each supervisee, then use the approach prescribed by the developmental model for each diagnosis. This design would not only allow for more certainty in determining whether supervisor diagnoses of supervisees' CL were accurate, but also would assure that equal numbers of supervisees of low, moderate, and high CL participated in the study.

One disadvantage of this type of study would be that the experts on supervisee CL would not know in advance the specific instructional

concern the supervisor and supervisee would deal with during the postobservation conference, hence could not diagnose in advance supervisees' problem-specific CL. This concern could be dealt with by having the experts make additional observations of the supervisees once problems had been defined (but before implementation of action plans). The results of the three developmental approaches could be measured and compared, and results of matched approaches compared with results of mismatched approaches. Results could be determined by expert opinions on the relative success of action plans, and by supervisor and supervisee valuations of the various types of conferences.

A third possible study would move away from examining supervisor diagnoses of supervisee CL and focus on comparing results of clearly matched and mismatched postobservation conferences. Experts on teacher CL would choose equal numbers of supervisees clearly at low, moderate, and high CL. Supervisors would not be asked to diagnose supervisee CL and would not be informed at what CL supervisees were functioning.

Supervisors would be told what approach to use with each supervisee. Approach assignments would be made so that supervisors would attempt a matched approach with half of the supervisees in each CL group and a mismatched approach with the other half of the supervisees in each CL group. Specific approaches used in the mismatched conferences for each CL group would be evenly divided between the two approaches used in the theory of developmental supervision that would be considered mismatches for supervisees in a particular CL group.

Assuming that most approaches would be effectively implemented (as they were in the study reported here), results of equivalent numbers of matched and mismatched conferences for each CL group could be compared.

Expert evaluation of instructional improvement, *and supervisor and* supervisee valuations of various types of conferences, could be used a outcome measures.

A fourth possible study would call for each participating supervisee to experience each of the three developmental supervisory approaches. Equal numbers of supervisees diagnosed by experts as possessing low, moderate, and high CL would participate in the study. Each supervisee would participate in three clinical cycles, with the same supervisor for each cycle. Supervisors would attempt to be informational directive in one postobservation conference, collaborative in another postobservation conference, and actively nondirective in yet another postobservation conference with the same supervisee, regardless of that supervisee's CL.

Research guidelines shared with supervisors and supervisees would call for problems and action plans discussed in the three postobservation conferences to be discrete but of equivalent levels of difficulty. The sequence of attempted approaches would vary from one set of three postobservation conferences to another, so that different developmental approaches would be attempted in the first, second, and third postobservation conference the same number of times. Assuming that most approaches were effectively implemented, this design would allow investigators to examine the effects of all three types of developmental approaches on individual supervisees, and on equivalent numbers of supervisees of each CL. Expert evaluations of instructional improvement, and supervisor and supervisee valuations of the various types of approaches, could be used as outcome measures.

A fifth possible study would be a quasi-experimental study involving four equivalent groups of supervisees, each divided into three subgroups of equal size. One subgroup within each group would consist of low CL supervisees, one of moderate CL supervisees, and one of high CL supervisees. Supervisee CL would be determined by experts on teacher CL prior to supervisors' entry into the study.

Supervisors would not be advised of supervisee CL but would be given a prescribed approach for each supervisee. Supervisors of supervisees within group one would attempt an informational directive approach with all supervisees in that group. Supervisors would attempt a collaborative approach with all supervisees in group two. Supervisors would attempt an actively nondirective approach with all supervisees in group three. Supervisees in group four would not be supervised, but would be asked to submit a goals and action plans for instructional improvement.

Assuming that most approaches would be effectively implemented, effects of each supervisory approach and of no supervision on supervisees functioning at each CL could be measured and compared by investigators using this design. Effects of matched and mismatched approaches within and across three of the four groups also could be examined by comparing expert-determined outcomes, and supervisor and supervisee valuations, of the matched and mismatched conferences.

A final set of suggestions relative to future research on the tactical dimension of developmental supervision relates to the effects of supervisor characteristics on (a) supervisor performance in diagnosing supervisee CL and implementing various developmental approaches, (b) supervisor and supervisee valuations of the three

developmental approaches, and (c) instructional improvement resulting from various types of developmental postobservation conferences. Three such characteristics include supervisor CL; supervisor orientation toward supervision; and supervisor expertise relative to content area, grade level, and the supervisee's instructional problem(s).

CL of supervisors participating in the study reported here was measured with an eye toward comparing supervisor performance, and various outcomes, to supervisor CL. Meaningful comparisons were not possible because nearly all of the supervisors who participated in the study were of high PCM-measured CL. Only two supervisors in this study were of moderate PCM-measured CL, and only one supervisor was of low PCM-measured CL. The supervisor of low CL was just below the cut-off between moderate and low CL. It should be noted that in this study there were no noteworthy differences between supervisors of high CL and supervisors of less than high CL relative to supervisor effectiveness, supervisor valuations of various types of conferences, or supervisee valuations of various types of conferences. Again, the scarcity of supervisors at moderate and low CL means that little can be drawn from these results.

As was suggested earlier, the prior supervisory orientations of supervisors involved in this study toward the collaborative and/or nondirective approach may have reduced supervisor valuations of the informational directive approaches implemented during this study. Measures of supervisor expertise relative to grade level, subject area, and particular types of instructional problems were not made in this study. It is recommended that measures of these supervisor variables be

made in future studies, and that these variables be examined for their effects.

Future Studies on the Strategic Dimension of Developmental Supervision

While this study did not address the strategic dimension of developmental supervision, any discussion of the developmental model would be incomplete without reference to efforts at fostering teachers' long-range development toward higher levels of thinking and acting. The strategic dimension of developmental supervision has been defined as "incremental directionality of planning supervisory encounters that stimulate teachers to take greater control over their professional lives" (Gordon & Glickman, 1984, p. 24). The strategic phase of developmental supervision is specifically "aimed at accelerating the development of teacher abstraction, helping teachers to think 'harder and smarter,' and stimulating their problem solving abilities" (Glickman & Gordon, 1987, p. 66).

In terms of direct assistance during postobservation conferences, strategies for fostering teacher development have been proposed by Glickman and Gordon (1984):

> Those teachers who initially need a great deal of direction (low CL teachers) would gradually ask to assume some responsibility for classroom change. This could be done by asking the teacher to select from choices provided by the supervisor. Still later, the teacher could begin the initial stages of a collaborative relationship, with the supervisor asking the teacher to suggest actions for his/her own instructional improvement. Teachers initially in a collaborative relationship (moderate CL teachers) could, in turn, be encouraged to gradually assume more responsibility for planning classroom change. The ultimate aim of developmental supervision is for teachers to assume full

> responsibility for improving their classroom performance, while seeking support and feedback from peers and supervisors. (p. 25)

A possible study on the strategical dimension of developmental supervision would involve long-range case studies of supervisors working with supervisees in a developmental manner throughout eight to ten clinical cycles. Supervisees' CL would be measured at the beginning and end of the long-range assistance. Periodic descriptions and ratings of supervisees' instructional behaviors could also be made.

Significant growth in teacher CL may be most effectively stimulated by a combination of direct assistance and group activities involving other teachers. The Deliberate Psychological Education Programs have successfully integrated group learning activities in counseling, supervision, individualizing instruction, developmental theory, guided reflection, and role taking; with follow-up consisting of counseling, supervision, support groups, and networks; to stimulate significant growth in teacher CL (Oja, 1978). Thies-Sprinthall (1984) has integrated Joyce and Weils' training model with differentiated curriculum strategies matched with lower and higher CL teachers in a course for supervising teachers. The course resulted in increased CL for both the lower and higher CL teachers. Finally, preliminary results in a study by Phillips (in progress) have shown that a peer coaching program, with teachers serving as peer coaches trained in developmental supervision, led to a significant gain in participating teachers' CL.

While the study reported here provides no direct implications for future research on the strategic dimension of developmental supervision, the investigator proposes that only continued research on both the

tactical and strategic dimensions of the developmental model will lead to a comprehensive understanding of developmental supervision's value for the improvement of teachers and teaching, and urges that researchers proceed with investigations relative to both of these dimensions.

Conclusion

Like most exploratory studies, the research reported here has raised as well as answered questions concerning the subject being investigated, in this case, developmental supervision. The investigator concludes this report with the proposition that the theory of developmental supervision is potentially of enormous value to supervisors, teachers, and ultimately, students. A theory with such potential deserves serious examination by theoreticians, researchers, and practitioners. The investigator urges others who sense the potential of this theory to join in the continuing exploration of developmental supervision.

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Appendix A

Supervisor-Teacher Interaction Analysis System (STIAS)

SUPERVISOR TALK		1. Reports observation data.
	NONDIRECTIVE BEHAVIOR	2. NONDIRECTIVE CLARIFYING: rephrases teacher statement or asks questions aimed at clarifying teacher perception, concern, present, possible, or planned action. 3. Encouraging: encourages teacher to elaborate on perception, concern, or plan; or encourages teacher to explore option(s). 4. NONDIRECTIVE PRESENTING: presents information--other than observation data--after specific teacher request to do so. 5. NONDIRECTIVE NEGOTIATING: asks teacher to determine goal, options, or action(s) to be taken.
	COLLABORATIVE BEHAVIOR	6. COLLABORATIVE CLARIFYING: asks teacher to present perceptions or proposals with statement that supervisor will follow with own perceptions or proposals. 7. COLLABORATIVE PRESENTING: presents perception, non-observation information, or proposes goal or action, before or after requesting teacher's perceptions or proposals. 8. PROBLEM SOLVING: summarizes or asks teacher to submit, support, consider, respond to, or reject alternative(s) during two person "brainstorming"; or requests collaborative effort at advantage-disadvantage analysis. 9. COLLABORATIVE NEGOTIATING: supports, explains, questions, suggests rejection of, accepts, suggests revision to, or asks for more information on one of several alternatives proposed during two-person brainstorming; summarizes agreement on perception(s) or action(s) to be taken; or engages in two-person advantage-disadvantage analysis.
	INFORMATIONAL DIRECTIVE BEHAVIOR	10. I.D. PRESENTING: suggests what or how information should be collected without requesting teacher suggestion(s) on what or how information might be collected. 11. I.D. CLARIFYING: offers perceptions or non-observation information without asking for teacher's perceptions. 12. DIRECTING: advises teacher on goal or specific action which should take place without asking for teacher proposal of possible goal or action. 13. I.D. DEMONSTRATING: explains, demonstrates, or supports directed goal or teaching behavior. 14. I.D. STANDARDIZING: suggests baseline data or standard of improvement without asking teacher to suggest baseline data or standard of improvement. 15. I.D. REINFORCING: use. positive feedback, or promise of giving or requesting future feedback, as incentive.
	CONTROLLING DIRECTIVE BEHAVIOR	16. C.D. CLARIFYING: arbitrarily defines problem without teacher's request to do so and without first requesting teacher's perception of problem; or rejects teacher's perception of problem; or makes negative value judgment of teacher perception, concern, present, possible or planned action. 17. C.D. PRESENTING: informs teacher what or how information will be collected. 18. MANDATING: mandates goal or action which is to take place, or uses authority to justify mandate, or ask question or makes statement aimed at producing specific teacher response. 19. C.D. DEMONSTRATING: explains, demonstrates, or supports mandated teaching behavior. 20. C.D. STANDARDIZING: mandates baseline data or standard for improvement. 21. C.D. REINFORCING: uses material, social, or job incentive.
		22. Supervisor can be understood, but behavior cannot be classified.
TEACHER TALK		23. TEACHER TALK-RESPONSE. 24. TEACHER TALK-INITIATION.
		25. SILENCE OR CONFUSION.

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Appendix B

Means of Numerical Values Assigned to RCPS Responses by Supervisees Involved in Informational Directive, Collaborative, Actively Nondirective, and Ineffective Developmental Postobservation Conferences

RCPS Item	Mean of Numerical Values Assigned to Supervisee Responses			
	Informational Directive (n = 13)	Collaborative (n = 16)[a]	Actively Nondirective (n = 12)	Ineffective (n = 6)
Value of time spent in conference	5.769	6.200	5.833	5.333
Supervisor's expertise	6.077	6.467	5.833	5.000
Sueprvisor's comprehension of supervisee's problem	6.308	6.600	5.917	4.833
Clarity of communication	6.384	6.143	5.417	6.167
Productivity of conference	6.077	6.133	6.000	5.000
Supervisor's ability to help during conference	6.231	6.400	5.750	4.500
Supervisor's genuineness during conference	6.538	6.467	6.417	6.333
Supervisee feelings as result of conference	6.231	6.333	6.417	6.000
Likelihood of asking supervisor for help when in need	6.385	6.733	6.667	4.833
Overall satisfaction with conference	6.385	6.800	6.333	5.167
Overall RCPS Mean	6.238	6.430	6.058	5.317

[a]Perceptions of one of these conferences were not reported.

Appendix C

Means of Numerical Values Assigned to RCPS Responses by Supervisees Involved in Matched and Unmatched Developmental Postobservation Conferences

RCPS Item	Mean of Numerical Value Assigned to Supervisee Response	
	Matched (n = 22)	Unmatched (n = 25)[a]
Value of time spent in conference	6.182	5.583
Supervisor's expertise	6.091	5.917
Supervisor's comprehension of supervisee's problem	6.136	6.087
Clarity of communication	5.954	6.087
Productivity of conference	6.045	5.833
Supervisor's ability to help during conference	6.045	5.833
Supervisor's genuineness during conference	6.364	6.542
Supervisee feelings as result of conference	6.364	6.208
Likelihood of asking supervisor for help when in need	6.591	6.167
Overall satisfaction with conference	6.454	6.250
Overall RCPS Mean	6.223	6.050

[a]Perceptions of one supervisee were not reported.